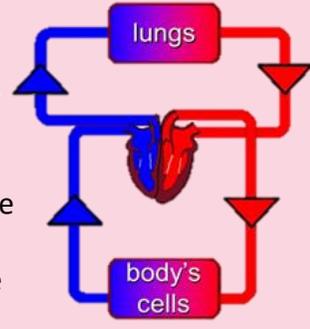


Biology: The Heart

Key word	Definition
Artery	Blood vessel that carries blood away from the heart. They have a thick elastic wall to maintain pressure.
Vein	Blood vessel that carries blood back to the heart. They have a thin wall and contain valves.
Capillary	Small blood vessels (one cell thick) which connect arteries and veins. Substances are exchanged here.
Valves	Prevents blood from flowing the wrong way.
Oxygenated blood	Blood with a large percentage of oxygen and low in carbon dioxide.
Deoxygenated blood	Blood with a large percentage of carbon dioxide and low in oxygen
Coronary blood vessel	Blood vessels which supply the heart muscle with blood
Pulmonary blood vessel	Blood vessels which connect the lungs
Non-communicable disease	Disease which is not caused by a pathogen and cannot be caught e.g. Coronary heart disease
Risk factor	Characteristic or activity which increases the likelihood of developing a disease

Double circulatory system

The heart is part of a double circulatory system. This means the blood travels through the heart twice on its journey around the body.



The right ventricle pumps blood to the lungs to become **oxygenated**
 The left ventricle pumps blood around the body where it becomes **deoxygenated**

The Heart

- The heart is made from muscle tissue.
- Heart rate is controlled by a group of cells in the right atrium that act as a pacemaker by setting off impulses which make the heart muscles contract.

Coronary Heart Disease

Fatty materials can build up in **coronary arteries**. This reduces blood flow to the heart muscle and a lack of oxygen to the cells can lead to a heart attack

Risk factors

The risk of developing **coronary heart disease** can be increased by several factors:

- Smoking
- High blood pressure
- High levels of saturated fat
- Obesity
- Stress
- Genetics

Treatments

Stents – Tubes inserted into the arteries to help keep them open

Statins – Drug which reduces cholesterol in the blood

Other diseases & treatments

Faulty heart **valves** can be replaced with biological or mechanical ones.

Patient's can also receive an artificial heart or a heart transplant